

Product Data Sheet

Tenite™ Butyrate 575E3720010 Clear, Trsp

Application/Uses

- Toys/Sporting goods

Product Description

Tenite™ cellulosic plastics are noted for their excellent balance of properties - toughness, hardness, strength, surface gloss, clarity, and a warm feel. The mechanical properties of Tenite™ cellulosic plastics differ with plasticizer levels. Lower plasticizer content yields a harder surface, higher heat resistance, greater rigidity, higher tensile strength, and better dimensional stability. Higher plasticizer content increases impact strength. Color concentrates are available in let-down ratios from 10:1 to 40:1. Tenite™ Cellulose Acetate Butyrate 575-10 contains an odor mask and has a plasticizer level of 10%.

Typical Properties

Property ^a	Test ^b Method	Typical Value, Units ^c
Plasticizer		10%
Specific Gravity	D 792	1.19

Mechanical Properties		
Tensile Stress @ Yield	D 638	33.1 MPa (4800 psi)
Tensile Stress @ Break	D 638	43.4 MPa (6300 psi)
Elongation @ Break	D 638	50%
Flexural Modulus	D 790	1379 MPa (2.00 x 10 ⁵ psi)
Flexural Yield Strength	D 790	45.5 MPa (6600 psi)
Rockwell Hardness, R Scale	D 785	78
Izod Impact Strength, Notched		
@ 23°C (73°F)	D 256	240 J/m (4.5 ft·lbf/in.)
@ -40°C (-40°F)	D 256	96 J/m (1.8 ft·lbf/in.)

Thermal Properties		
Deflection Temperature ^d		
@ 1.82 MPa (264 psi)	D 648	74°C (165°F)
@ 0.455 MPa (66 psi)	D 648	85°C (185°F)
Vicat Softening Temperature ^d	D 1525	104°C (219°F)

Permanence Properties		
Water Absorption, 24 h immersion	D 570	1.4%
Soluble Matter Loss	D 570	0.1%
Weight Loss on Heating [72 hours @ 80°C (176°F)]	D 707	0.5%
Miscellaneous Butyrate Properties		
Refractive Index, n_D	D 542	1.46-1.49
Light Transmission ^e	E 308	>90%
Haze ^e	D 1003	<8.5%
Specific Heat @ 23°C (73°F)	DSC	1.26-1.67 kJ/kg·K (0.301-0.399 Btu/lb·°F)
Thermal Conductivity	C 177	0.17-0.33 W/m·K (1.2-2.3 Btu·in./h·ft ² ·°F)
Coefficient of Linear Thermal Expansion	D 696	11-17 x 10 ⁻⁵ /°C (mm/mm·°C) (6-9 x 10 ⁻⁵ /°F (in./in.·°F))
Mold Shrinkage	D 955	0.2-0.6%
Dielectric Strength	D 149	11.8-18.7 kV/mm (300-475 V/mil)
Dielectric Constant 1 MHz	D 150	3.3-3.8
Dissipation Factor 1 MHz	D 150	0.01-0.15
Volume Resistivity	D 257	10 ¹³ -10 ¹⁵ ohm·cm

^a Unless noted otherwise, all tests are run at 23°C (73°F) and 50% relative humidity.

^b Unless noted otherwise, the test method is ASTM.

^c Units are in SI or US customary units.

^d Conditioned 4 hours @ 70°C (158°F)

^e 1.52-mm (0.06-in.) specimen thickness

Characteristics

Formula 575 - odor mask; standard inventory. Available in 10% plasticizer only.

Comments

Properties reported here are typical of average lots. Eastman makes no representation that the material in any particular shipment will conform exactly to the values given.

Eastman and its marketing affiliates shall not be responsible for the use of this information, or of any product, method, or apparatus mentioned, and you must make your own determination of its suitability and completeness for your own use, for the protection of the environment, and for the health and safety of your employees and purchasers of your products. No warranty is made of the merchantability of fitness of any product, and nothing herein waives any of the Seller's conditions of sale.

27-Jun-2001 3:37:00 PM